Remarks **BEST AVAILABLE COPY**

Applicant respectfully requests reconsideration of this application as amended.

Claims 1-29 have been amended. No claims have been cancelled or added. Therefore, claims 1-29 are presented for examination.

35 U.S.C. §103(a) Rejection

Claims 1-3, 5-12 and 14-28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Sprangle and Patt's "Facilitating Superscalar Processing via a Combined Static/Dynamic register Renaming Scheme, " ©1994 (hereinafter referred to as "Sprangle") in view of Arora et al. (U.S. Patent No. 5,832,260) (herein referred to as "Arora"). Applicant submits that the present claims are patentable over Sprangle in view of Arora.

Sprangle discloses a superscalar implementation of a conventional instruction set architecture (ISA). Sprangle proposes designing an ISA such that a basic block is the atomic unit of work, rather than the single instruction being the atomic unit of work. Sprangle shows that a statically defined tag ISA is better suited for a superscalar processor that supports register renaming. (Sprangle at pg. 143, Abstract & § 1.) In addition, Sprangle discusses predicated execution and register renaming. (Sprangle at §6.)

Arora discloses a processor micro-architecture for efficient processing of instructions in a program including a program flow control instruction. The program flow control instruction specifies a target instruction and includes one or more candidate instructions between the target instruction and the program flow control instruction. A fetch unit fetches instructions in the program from the memory. Control logic stores one or more candidate instructions in the buffer prior to resolution of the condition program flow control instruction

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in response to the fetch unit fetching a program flow control instruction specifying a target instruction within a predetermined number of instructions from the conditional program flow control instruction. (Arora at Abstract.)

Claim 1, as amended, recites:

A method, comprising:
    decoding an original instruction into a complementary-predicated pair of instructions including a predicate-positive instruction and a predicate-negative move instruction;
    renaming both a first destination register of the predicate-positive instruction and a second destination register of the predicate-negative move instruction to a same physical register; and
    retiring either the predicate-positive instruction or the predicate-negative move instruction responsive to a predicate value associated with both instructions.

Applicant submits that Sprangle does not disclose or suggest decoding an original instruction into a complementary-predicated pair of instructions including a predicate-positive instruction and a predicate-negative move instruction, as recited by claim 1. The Office Action cites Sprangle at §6, Tables 4 through 6 as a relevant to the cited feature of claim 1. (Office Action mailed 5/24/06 at pg. 2, pt. 5(a)(i).) However, Table 4 of Sprangle actually discloses "the translation of a high level language fragment into assembly language instructions using if-conversion." (Sprangle at §6, pgs. 145-146; Table 4.) Further examination of Table 4 of Sprangle reveals that it is actually separate multiple conditional high level language instructions that are being translated into assembly language. Table 4 of Sprangle does not disclose that a single original instruction is decoded into a complementary-predicated pair of instructions that includes a predicate-positive instruction and a predicate-negative move instruction. Rather, Sprangle is discussing utilizing predicate instructions on conditional branch instructions. As a result, Sprangle does not disclose or suggest the cited feature of claim 1.

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Applicant further submits that Arora also does not disclose or suggest decoding an

original instruction into a complementary-predicated pair of instructions including a

predicate-positive instruction and a predicate-negative move instruction. The Office Action

does not rely on Arora to disclose this feature. In addition, applicant can find no disclosure or

suggestion of this feature anywhere in Arora. Therefore, Arora does not disclose or suggest

the cited feature of claim 1.

As neither of Sprangle nor Arora individually disclose or suggest decoding an original

instruction into a complementary-predicated pair of instructions including a predicate-positive

instruction and a predicate-negative move instruction, any combination of Sprangle and Arora

also does not disclose or suggest such a feature. Therefore, claim 1, as well as its dependent

claim is patentable over Sprangle in view of Arora.

Independent claims 10, 18, and 24 also recite, in part, <u>decoding an original instruction</u>

<u>into a complementary-predicated pair of instructions including a predicate-positive instruction</u>

<u>and a predicate-negative move instruction</u>. As discussed above, Sprangle in view of Arora

does not disclose or suggest such a feature. Therefore, claims 10, 18, and 24, as well as their

respective dependent claims, are patentable over Sprangle in view of Arora for the reasons

discussed above with respect to claim 1.

Claims 4 and 13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over

Sprangle and Arora , as applied to claim 3 above, and further in view of Rodgers et al. (U.S.

Patent No. 6,496,925) (herein referred to as "Rodgers"). Applicant submits that the present

claims are patentable over Sprangle and Arora even in view of Rodgers. Claims 4 and 13

depend from independent claims 1 and 10, respectively. As discussed above, claims 1 and 10

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are patentable over Sprangle in view of Arora. Rodgers does not remedy the deficiencies of

Sprangle and Arora in light of claims 1 and 10. Therefore, claims 4 and 13 are patentable

over Sprangle and Arora, further in view of Rodgers.

Applicant respectfully submits that the rejections have been overcome and that the

claims are in condition for allowance. Accordingly, applicant respectfully requests the

rejections be withdrawn and the claims be allowed.

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains
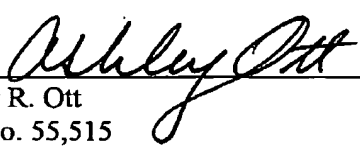
any issue with allowance of the case.

Applicant respectfully petitions for an extension of time to respond to the outstanding

Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our

Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such

an extension.

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: August 24, 2006   _____

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